MC108

HOSPITAL BUILDING NOTE

CHILDREN'S WARD

23

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An addendum to Appendix E of Hospital Building Note No. 2, *The Cost of Hospital Buildings*, which sets out cost recommendations for the Children's Ward, is supplied with this Building Note.

I. Scope

1. This Building Note gives guidance on the design of a children's ward unit for a district general hospital.

II. General considerations

2. The number of children admitted to hospital is on the decline and in some hospitals only one ward unit will be required for all children. Where more than one is required it may be advantageous to group the younger children (possibly the under-fives) in one unit and have the older children in another, because some of the children's requirements and the accommodation provided (milk kitchen, schoolrooms, etc.) will depend on their age group. However, for the purposes of this Building Note it is assumed that the ward unit will cater for either sex and all age groups, from babies to an age when the children are considered old enough to be admitted to an adult ward. An upper age limit is not indicated as this is a matter on which the views of individual hospital authorities may differ.

3. The current trend is towards admitting some mothers with their children, particularly in the case of children in the under-five age groups. This has the two-fold advantage of reducing the anxiety of both the small child and mother and enabling the mothers to assist in the care of their children. Provision should always be made for some ' mother-and-child ' rooms, for although there have in the past been instances of the under-use of accommodation for this purpose, it is considered that in time the therapeutic value of admitting the mother with her child will be more fully realised.

4. Children of school age may receive educational instruction even though they are in hospital for a comparatively short time and an area which can be used for this purpose should be provided.

5. No recommendations are made on the ratio of children's beds to adult beds in the hospital as this is largely influenced by local factors such as the proximity of a children's hospital or specialised hospitals with children's departments.

6. The ratio of nurses to patients in a children's ward has to be considerably higher than in an adult ward. It is generally agreed that from the point of view of nursing, 20–25 beds per ward unit is a suitable number unless the unit is confined to a very young age group (e.g. under two years of age) or devoted to some particularly heavy paediatric nursing such as neo-natal surgery, when the appropriate figure might well be 10-15 cots. In this Building Note a ward unit with a minimum of 20 children's beds is assumed, with space for some mothers.

7. In planning ward units for adults in new hospitals it is recommended (Building Note No. 4) that the proportion of single rooms should be not less than 20 per cent of the total number of beds. In children's wards this proportion should be increased to 40 per cent to allow a sufficient number of bedrooms to be available for ' mother-and-child ' rooms, for unaccompanied children under 2 years of age, for some new admissions, etc. The rest of the ward should be sub-divided into bays or rooms containing between four and eight beds, bearing in mind that greater sub-division allows the placing of patients into small groups according to age or speciality, but that larger groups make for ease of supervision and that children, generally, like being together.

8. This Building Note assumes the following bed distribution:

12 beds in multi-bed rooms
8 beds in single rooms
(at least 4 of these " single " rooms to be sufficiently large to allow for an additional bed for a mother).

9. Children with infectious diseases will generally be transferred to an isolation ward within the hospital or to one of the special isolation units which will be planned in the grounds of certain hospitals designated to serve the surrounding area. However, in the children's wards, as with adult wards, it is recommended that one or two of the single rooms should be provided with special ventilation both ways (see paragraph 96) so that any potentially infectious child, or one who is particularly liable to risk of infection, can be nursed here.

10. The whole ward unit should be planned with particular attention to ease of supervision by the nurses. Not only does the nurse want to be able to see the children but the children also want to be able to see each other and the nurse, as this gives them a greater feeling of security and companionship. Bed areas and ablution areas should be designed to a more open plan than for adult wards. Where it is necessary to enclose the bed areas (as for the single rooms) the partitions should have large glass viewing panels.

11. To facilitate the planning of ward units above each other it is convenient if the overall area and shape of the children's unit corresponds with that recommended for the general adult ward units. This has been assumed in this Note and is quite feasible, for although the children's unit will have a greater proportion of single rooms and a larger area of day space, the total number of patients will be smaller than in an adult ward.

12. Some of the accommodation associated with a normal ward (such as the visitors' waiting space, staff cloakrooms, etc.) is usually planned near the entrance and lifts, to serve a group of wards instead of each individual ward unit. This system of grouping and sharing of rooms can still be operated on a ward floor containing a children's ward, irrespective of whether or not the whole floor is occupied by children's wards.

13. Children require outdoor play spaces and, ideally, the children's ward should be planned on the ground floor with direct access to a play space complete with sand-pit, swings and climbing frame, etc. However, in many cases it will not be possible to plan the children's ward at ground level and it will then be necessary to provide some play space on balconies or roof terraces, adjacent to the ward where planning permits, with the possible addition of another play space in the hospital grounds if a larger area is required. All play spaces should be walled, fenced or wired-in to protect the children.

14. Other precautions are necessary for the protection of children; door handles, fire appliances, bedhead lights and power points should be suitably placed and of a safe design; there should be no danger of the children being burnt by radiators or scalded by hot water from the taps of the lavatory basins or baths; the windows will probably require some form of screening and/or safety locks; any balconies should be protected by railings designed to prevent the possibility of children climbing under, over, or through them; railings and stair bannisters should be designed so that children cannot get their heads fixed in them.

15. A comprehensive list of the equipment required in a ward is detailed in the Hospital Equipment Note No. 4 on Ward Units. Any variations necessary for the children's ward will be detailed in a separate Equipment Note. The equipment listed in this Note is merely included as a guide for the planning and space requirements and is not a complete list.

III. List of rooms

A. Basic accommodation

16. This should be provided in all cases and should consist of the following:

(*a*) *Wards*
- (i) Single-bed rooms
- (ii) Mother-and-child rooms
- (iii) Mutiple-bed rooms or bays

(*b*) *Day space*

(*c*) *Treatment room*

(*d*) *Utility rooms*
- (i) Clean utility room
- (ii) Dirty utility room

(*e*) *Bathroom*

(*f*) *Patients' washing facilities*

(*g*) *W.c.'s*

(*h*) *Sluice and test room*

(*i*) *Sister's room*

(*j*) *Nurses' station*

(*k*) *Ward pantry*

(*l*) *Linen bay*

(*m*) *Stores*

(*n*) *Cleaners' room*

(*o*) *Trolley/wheelchair bay*

(*p*) *Flower room or bay*

(*q*) *Staff lavatories and cloakrooms**

(*r*) *Doctors' room*

(*s*) *Room(s) for relatives of dangerously ill patients**

(*t*) *Visitors' waiting space**

(*u*) *Visitors' lavatory accommodation**

(*v*) *Parents' sitting room*

(*w*) *Mothers' washing facilities*

(*x*) *Sundry facilities (hoists, etc.)*

(*y*) *Circulation space*

Functional unit

17. The functional unit selected for the basic accommodation in this Note and the related Cost Note (Appendix E to Building Note No. 2) is the bed.

B. Additional accommodation

18. Some accommodation additional to the basic may be required:

(*a*) *Admission room*

(*b*) *Milk room*

(*c*) *Dirty utility room*

(*d*) *Kitchenette*

*This accommodation should be planned to serve the whole ward floor, not each individual unit.

IV. Description of rooms

General description of doors through the ward

19. It is recommended that the range of modular door assemblies being proposed by the Inter-Board Study Group in a forthcoming Design Note should be used throughout. This allows a variety of openable widths, to suit varying furniture needs for individual rooms.

A. Basic accommodation

20. The Appendix lists the basic accommodation with recommended areas.

(a) Wards

Generally

21. Table-height shelving or wide window-sills (providing the lower part of the window has fixed glazing) can be used for housing some of the children's personal toys.

22. Bed tables and cot trays will be needed for meals, school-work and play.

23. For the purposes of this Note it is assumed that the ward unit includes children of all ages and that the older children will be in the multi-bed rooms, while the babies and very young children will usually be in the single or mother-and-child rooms. A baby's bath is therefore recommended as fixed equipment in the single and mother-and-child rooms.

24. The single rooms and mother-and-child rooms should be planned with large glass panels in the partition walls so that the nurse can see from corridor to room, and from room to room. Blinds or curtains should be provided within the room to cover the panels when privacy is required. Blinds or curtains may be required for some outside windows where direct sunlight may cause annoyance to patients.

25. It is recommended that at least one of the single rooms and one of the mother-and-child rooms should be provided with an en suite w.c.

(i) *Single-bed rooms*

26. The single-bed ward may be used for the acutely ill child, for a baby, for a noisy case or for isolation purposes. An area of 120 sq. ft. (the equivalent of the smaller single rooms in the adult wards) is required as the absolute minimum.

27. These rooms should be equipped with a hospital bed or cot, a patient's bedside locker, wardrobe space for hanging and storing clothes, a nursing chair and a babies' bath. The bath will also be used as a lavatory basin for the staff and a compromise has to be reached to make the bath convenient for both purposes. The bath should be at a suitable height to enable the nurse to sit on a nursing chair and lift the baby from the bath on to her lap, and the elbow-operated taps and swivel spout at a height convenient for the staff to wash their hands.

(ii) *Mother-and-child rooms*

28. It is recommended that at least half of the single rooms should be larger and capable of being used for mother and child, two infants in incubators, or one child plus bulky equipment. A minimum area of 140 sq. ft. would be adequate for this purpose, but it may be found desirable to increase the areas of some of these rooms to approximately 200 sq. ft. They could then be used as a two-bedded unit for adolescent boys or girls if necessary.

29. The rooms should have the same equipment as for the single rooms, plus the addition of a divan and small table. The divan should be an ordinary, low type with a movable back rest which may be pulled into position during the day to turn the divan into a comfortable seat; this avoids the necessity of providing an armchair for the mother. Some wardrobe space will be required for the mother's belongings in addition to the child's.

(iii) *Multi-bed rooms or bays*

30. The adoption of open bays, rather than enclosed rooms, for children's wards make supervision easier, but this must be balanced against the possibility that enclosed multi-bedded rooms lessen the risk of cross-infection and allow greater flexibility for the segregation of different types of patients (e.g. adolescents). Each bay or room should have between 4 and 8 beds.

31. Beds or cots should be at 8 ft. centres with sufficient space between foot-ends to ensure the free passage of other beds, portable equipment, trolleys and wheelchairs: as some beds or cots may have attachments such as Balkan beams, it is considered necessary for the ward to have a minimum clear width of 21 ft. to satisfy these conditions if there are beds on both sides of the room.

32. Each patient should have a hospital bed or cot, a chair, a bedside locker and, where desired, a bed-table. Each bay or room should have a lavatory basin which will be mainly used by the staff and should therefore be fitted with elbow-operated taps. Wardrobe space for hanging and storing children's clothes should be provided within the bay or room.

(b) Day-space

33. The growing practice is towards the earlier ambulation of patients and whilst the proportion of patients who are up varies between different ward units, it may be as much as 60 per cent at certain times. To provide sufficient day-space a floor area of at least 30 sq. ft. is recommended for each bed in the children's ward unit.

34. The day-space will be used for playing, for television, as an exercise area (e.g. walking exercises for orthopaedic cases), for dining and possibly for school work for the older children. It will also be used by parents playing with their children. Where there is a wide range of age groups in the ward unit it will usually be advisable to plan part of the day-space as a separate room for school work, or to plan the day-space so that it can easily be separated by a folding partition. Cupboards should be provided for storing toys, including bulky items such as dolls' prams, etc., and for school equipment. They should open directly off the day-space.

35. This area should be conveniently situated for easy access by the children and supervision by the nursing staff. Planning the day-space away from the bed areas has much to commend it, particularly in the case of a quiet room used for school work: but the general preference is to site this area immediately adjacent to the multiple-bed areas as children are happiest in a group.

36. This area should be made to look as light and attractive as possible. Chairs and tables are the main furniture required and these should be provided in small sizes for the toddlers and normal adult sizes for older children. Wheelchairs especially designed for children may also be used in this area. Bookcases and shelves for toys will be needed. Possibly the lower portion of one wall might be covered with blackboards for the younger children to draw on, and pin-up boarding to enable the children to display their own drawings and paintings. A wall-mounted chalk board at the usual level will be required in any area used as a schoolroom.

(*c*) *Treatment room*

37. Whilst minor treatment—injections, care of backs, and so on—may be carried out in the ward unit, many forms of treatment, including dressings (except perhaps in the case of patients occupying single rooms) will be given in the treatment room to which the patient would sometimes be brought in his bed. The room should be designed to take a standard hospital bed, and should contain a stool, two dressings trolleys, a ceiling-fixed adjustable lamp and a lavatory basin fitted with elbow-operated taps. A couch and chair will be required for ambulant patients.

(*d*) *Utility rooms*

38. It is assumed that all future wards will be served by a central sterile supply department, whether this is within the hospital or situated at some other hospital: therefore no provision should be made for sterilising facilities on the ward.

39. The clean and dirty utility rooms may be planned en suite with the treatment room in each ward unit or, alternatively, they may be planned centrally, near the service lifts, to serve the whole ward floor. This will be largely determined by the hospital's organisational policy—whether it is preferred that all rooms issuing and disposing of goods at ward level be centralised (grouping and limiting the service lifts and hoists, etc.) or whether it is preferred to have goods issued and disposed of at the point of requirement (generally resulting in the dispersal of lifts and hoists and possibly rather more of them).

40. If the utility rooms are planned adjacent to the treatment room there could be service hatches, opening over a work-top in the utility room, between the treatment room and the clean and dirty utility room.

41. If the utility rooms are planned centrally it may be necessary to have cupboards or lobbies, large enough to take trolleys or disposal bins, etc., adjacent to each treatment room.

42. The areas recommended in the Appendix are for separate clean and dirty utility rooms serving each treatment room; where central utility rooms are planned to serve the whole ward floor the individual areas should be grouped to provide larger areas, but where two or three treatment rooms are being served it should not be necessary to increase the area fully pro rata.

(i) *Clean utility room*

43. This is required as a preparation and storage room to serve the treatment room and for making up trolleys for bedside treatment. The room should be equipped with work-tops, cupboards or shelves for medicines, lotions and sterile packs, etc., lockable cupboards for drugs and for accommodating the medicine trolley and a lavatory basin with elbow-operated taps. Space is required for packing and laying-up trolleys. If the clean utility room is planned centrally the cupboards for drugs and for the medicine trolley should go in the nurses' station.

(ii) *Dirty utility room*

44. This is where dirty or used materials can be cleaned (if necessary) and stored temporarily pending disposal or transfer to the central sterile supply department, laundry, etc. It should be equipped with a work-top, shelving or space for C.S.S.D. collection trolleys, a sink with elbow-operated taps, draining board, disposal bins and stands for soiled linen bags.

(*e*) *Bathroom*

45. In Building Note No. 4 it was suggested that one bath should be provided for every 10 patients and that at least one bathroom for each ward unit should be designed to accommodate a free-standing bath with space for a bed to be brought alongside.

46. In a children's ward all those who are very young, as well as those who are only partially ambulant, will require assistance, and the majority will require supervision; for this reason the planning of the bathrooms may differ from that in the adult ward.

47. The following paragraph describes a bathroom layout which would be suitable for a children's ward

unit as described in paragraph 8. (12 patients in multi-bed areas, 8 patients in single rooms with babies' bath included.) But this is not the only solution. Where there is more than one children's ward unit in the hospital and the children are grouped according to age, some other planning arrangement (perhaps with different sized baths and more provision of showers) may be preferred.

48. The bathroom might accommodate two free-standing baths, one an ordinary bath and the other a child's bath for the younger children (raised from the ground to save the nurses from stooping). Sufficient space should be allowed to enable a bed or cot to be brought alongside either bath. A lavatory basin should also be included in the bathroom, and this should be fitted with ordinary taps and a shower-spray attachment for hair washing. The baths and lavatory basin should be separated by curtains so that older children can bath or wash themselves in comparative privacy while at the same time a nurse could be bathing a toddler.

49. Two baths should often be adequate for a ward unit of this size, as the single rooms are equipped with their own babies' baths. But to allow greater flexibility for a range of age groups an additional shower cubicle has been allowed for in the basic accommodation for use by older children.

(*f*) *Patients washing facilities*

50. Ambulant children are able to wash themselves at lavatory basins which should preferably be grouped together or with the baths for ease of supervision. It is suggested that one lavatory basin should be planned with the bathroom (see paragraph 48) and another group of 2 or 3 planned together, possibly with the w.c. compartments. Partitions should be provided round some lavatory basins to allow privacy for older children.

51. Lavatory basins should be provided in the proportion of not less than one to every six in the multi-bed wards. It is suggested that one of the lavatory basins should be at a suitable height for toddlers. Lavatory basins fitted with elbow-operated taps should be provided in multi-bed wards for use by staff. All lavatory basins to be used by children should have thermostatic control of hot water.

(*g*) *W.c.'s*

52. Prior to their being ambulant children may be wheeled to the w.c. Apart from those children in single-bed wards for whom separate w.c. provision is made, the remaining children should be provided with w.c.'s in the proportion of one w.c. to every six patients. There should be a minimum of three communal w.c.'s and two of these compartments should be wide enough to allow for a sani-chair or wheelchair and an attendant. If the w.c.'s are grouped together sani-chairs may be parked here.

53. It is recommended that the water closets throughout the unit should be of the same normal size as the children are used to at home, rather than designed to a smaller scale: small foot platforms which can either be fixed or movable can be provided where necessary. Doors should be provided with a special catch which can be opened also from the outside. Older children like privacy and may prefer full-height doors, but many younger children do not like to feel "shut-in" and would prefer a door with a gap of about 1 ft. 6 in. at the top or the bottom, or partition walls which do not go full height.

54. An area of about 30 sq. ft. could be provided in one of the lavatory units, where the children who are too young to use the w.c. can be "potted". In or near this area should be included a low-level lavatory basin for the toddlers to wash their hands. (See paragraph 51.)

55. At least 2 w.c.'s should be provided en suite with single room and/or mother-and-child rooms. (See paragraph 25.)

(*h*) *Sluice and test room*

56. This room is essentially a place for emptying, cleaning and storing bed-pans, urine bottles and pots, and for carrying out simple clinical investigations such as urine testing. It should contain a flushing sink with a slab, bed-pan and pot washer and steriliser, main nappy bin, storage facilities for pots, bed-pans and nappy buckets, a small sink unit with elbow-operated taps, adequate shelving, an acid-proof worktop, and both a ventilated cupboard for stool specimens and 24-hour urine specimens, etc., and a lockable cupboard to house the urine testing stand or fitment. In the past, sluice rooms have been used for washing and cleaning mackintosh sheets, but this work should be removed from the ward unit altogether.

(*i*) *Sister's room*

57. This is essentially a ward office to be used for interviewing staff and relatives and preparing reports. In some cases this room is planned near the entrance to the ward unit, but a position nearer the centre of the unit is often preferred. The room should contain a desk, table(s), chairs, lockable storage cupboard, a bookcase or shelves, and possibly a filing cabinet.

(*j*) *Nurses' station*

58. It is important in a children's ward that the nurses' station should be as simple as possible and should present no physical barrier between the child and the nurse. The station will be used by the nurse when writing up her notes, or the houseman referring to charts or signing drug cards, etc. It should consist of a table, or built-in bench, a telephone, a couple of chairs, a fixed notice board above, and adequate storage space for temperature and other charts used by the nursing staff; also lockable cupboards for drugs and for the medicine trolley if this is not in the clean utility room. In many cases it

will be necessary to provide two stations, especially for observation purposes at night.

(*k*) *Ward pantry*

59. The function of the ward pantry is the distribution of cooked meals supplied from the main kitchen and the preparation of beverages. Its position will depend on the inter-relation of the ward design and the organisation of the supply and disposal system. The trend is towards locating the ward pantry centrally to serve more than one ward unit. A shared ward pantry is acceptable for children's wards providing all the ward units served are children's wards; it is considered undesirable for the same pantry to serve both children's and adult wards.

60. One ward pantry positioned centrally can usually adequately serve a ward floor of about 40-50 children (2 ward units). An area of 240 sq. ft. is recommended and it is advisable to plan this room near the service lift(s). For a ward floor serving a greater number of beds it may be desirable to provide an additional pantry, of approximately 140 sq. ft., in another position, rather than increase the area of the one pantry. Where a ward pantry is positioned centrally to serve more than one ward unit, it will be necessary to provide small " sub-units " close to the bed areas so that the nursing staff can make beverages for the patients, particularly at night, without moving far from the bed areas. The " sub-unit " should have a minimal amount of equipment, i.e. a boiling ring, a small sink, a worktop and storage cupboard for a limited amount of crockery and beverage ingredients.

61. If separate ward pantries are provided for each ward unit it is recommended that a minimum area of 140 sq. ft. is required for each pantry. " Sub-units " should not be needed in this case. The room should be equipped with a hot closet, boiling rings, a toaster or grill, an instantaneous water boiler, one stainless steel sink with draining boards, a refrigerator to take the day's supply of milk, a cupboard with tray-type shelves for crockery and cutlery, ventilated storage cupboards for dry goods, worktop, tray racks and space for service trolley. If there is no lavatory basin planned nearby it will be necessary to include one in the pantry. Where a full centralised tray service is installed for patients' meals the requirements in the ward pantry will be as above, omitting only the hot closet.

62. If washing-up is not organised on a central or group basis facilities will also be required for washing-up ward crockery and the area of the pantry will need to be increased. The equipment listed above will be needed except that either a dish-washer or an additional sink with a heating unit should be provided in sequence with the sink. In both cases ample worktop space is required for the stacking and air-drying of crockery.

(*l*) *Linen bay*

63. It is a growing practice to provide a centralised linen supply, with each ward unit holding its day-to-day working stock in linen trolley bays, totalling some 50 sq. ft. In some ward layouts it may be necessary to have some shelving for babies' clothes.

(*m*) *Stores*

64. As in the case of linen, the increasing preference for centralisation has reduced the need for a large number of stores dispersed throughout the hospital. There is, however, need for storage space in the children's ward for cot sides, bed cradles, lifting poles, large quantities of toys and books and educational equipment, and space for parking trolleys used for taking equipment, etc., to patients who cannot leave the ward. This storage space should preferably be divided up, some areas opening off the day-space and others sited with the bed areas.

(*n*) *Cleaners' room*

65. A cleaners' room is required with a bucket sink with hot and cold water, drainer, and space for mechanical cleaning equipment, cleaning utensils, etc.

(*o*) *Trolley/wheelchair bay*

66. The supply of trolleys and wheelchairs for taking patients to diagnostic and treatment departments is frequently centralised and is the responsibility of the portering staff. Provision should, however, be made for housing wheelchairs which are used and kept within the ward unit, and for prams for the smaller children.

(*p*) *Flower room or bay*

67. A small room or bay for arranging flowers is required. This should be designed to accommodate a trolley and be fitted with a sink, drainer and shelves and/or cupboard for flower vases.

(*q*) *Staff lavatories and cloakrooms*

68. Lavatory accommodation (w.c.'s and lavatory basins) is required for both male and female members of the staff and this should be planned to serve the whole ward floor. The recommended ratio is 1 w.c. and 1 lavatory basin for every 12 persons likely to be on duty at the same time. One w.c. and 1 lavatory basin should be adequate for the male staff, but greater provision will be required for the female staff (nurses, domestic workers, orderlies, etc.).

69. All non-resident staff should have cloakroom accommodation provided centrally within the hospital (see Building Note No. 18, Administrative Department), but in addition there should be a small cloakroom on each ward floor where all the nurses can leave their cloaks, change their shoes and deposit any personal possessions in small lockers. This room should be planned at or just inside the entrance to a ward unless it is centrally placed in a

shared link area between wards. It should also have a communicating door to the female staff lavatory.

(*r*) *Doctors' room*

70. This room is required primarily for the use of house officers writing up notes, interviewing parents and giving occasional consultations. The room should contain a desk, chairs, bookcases, etc.

(*s*) *Room(s) for relatives of dangerously ill patients*

71. It is recommended that one of these rooms should be allocated to every 40-50 beds (60 beds in adult wards). They should preferably be planned on the ward floor rather than elsewhere in the hospital, as it may be necessary for visitors to be fetched hurriedly and taken to the bedside of a patient. One of these rooms could also be available for any mother who has come to stay in the hospital with her child, where it is considered preferable for the mother to sleep apart from her child.

(*t*) *Visitors' waiting space*

72. Waiting space will be required near the ward entrance for visitors to patients. One waiting space can usually serve the whole ward floor and this can either be planned as part of a main lift or staircase hall or as a room or bay off this area.

(*u*) *Visitors' lavatory accommodation*

73. One unit (each containing a w.c. and lavatory basin) should be provided for each sex to serve the ward floor. These should be planned near the visitors' waiting space and near the rooms for relatives of dangerously ill patients.

(*v*) *Parents' sitting room*

74. A sitting room should be available for any parents who will be remaining in the hospital for long periods and will need somewhere where they can relax and have meals. The room should be pleasantly furnished with tables and comfortable chairs. Some locker fitments may be required in which the visitor can leave outdoor clothes and shopping bags. A minimum area of 120 sq. ft. should be provided, but this will have to be increased if the room is widely used by several mothers at the same time or if the room is planned to serve more than one ward unit.

(*w*) *Mothers' washing facilities*

75. Visitors' lavatory accommodation planned near the waiting space is included, but additional ablution facilities should be provided for the mothers who may be staying in the hospital for several days. Two separate compartments, one containing a w.c. and lavatory basin, and the other containing a shower bath and space for dressing, should be planned near the mother-and-child rooms.

(*x*) *Sundry facilities*

76. Hoists and small engineering service ducts are included in the " Basic accommodation ".

(*y*) *Circulation space*

77. The total amount of circulation space should be kept to the minimum so as to provide a closely integrated unit. Corridors should be well lit and ventilated and a minimum width of 7ft. in the clear is recommended.

B. Additional accommodation

(*a*) *Admission room*

78. This may be required for the resident doctor to take the history, examine the patient and interview the parents before the child is admitted to the ward. The room should be equipped with a desk, chairs, examination couch and lavatory basin with elbow-operated taps.

79. This room could also serve as a demonstration room for a mother to be instructed on how to look after her child prior to discharge home.

(*b*) *Milk room*

80. If there is no central milk kitchen within the hospital complex which can also serve the children's ward, a milk room should be provided where the preparation of the babies' feeds can be undertaken in aseptic conditions and where the associated washing-up can be satisfactorily done (see Building Note No. 21, Maternity Department).

81. There are two methods generally in use for sterilising babies' bottles after they have been washed; either soaking the bottles in hypochlorite solution or autoclaving the bottles. If the first method is used two deep porcelain sinks, minimum depth 15 in., with plastic outlets will be required for soaking the feeding bottles and utensils. If the autoclave method is used it may be possible to take the bottles to the central sterile supply department if this is situated in the hospital. If it is situated at another hospital it will be necessary to install an autoclave in the milk room.

82. Where terminal sterilisation of milk is carried out, filled bottles are placed in an ordinary type of boiling steriliser (with the water below the level of the teats) or in a non-pressure type autoclave to pasteurise the milk. Again the equipment required will depend on the method used. After pasteurising the milk the bottles are allowed to cool and are then placed in a refrigerator until required, when they are taken out and heated to the correct temperature and brought to the child.

83. The planning of this room and its division into two completely separate sections (" clean " and " dirty " sides linked only by a hatch or a double-ended autoclave), the size of the sections and the

equipment required will be largely determined by the method of sterilising the bottles and pasteurising the milk. A total area of about 200 sq. ft. is required.

(c) Dirty utility room

84. Where some of the single (or double) rooms are planned as a separate group, such as a special unit for babies, a second dirty utility/sluice room may be required to serve these rooms. The equipment will be the same as for the main dirty utility room (see paragraph 44) or for the sluice room (see paragraph 56).

(d) Kitchenette

85. A room of about 60 sq. ft. may be needed where the mothers can prepare light meals for themselves, etc. This room should have a sink, drainer, some type of simple cooking facility and a drying cupboard or rack for laundry.

V. Engineering services

86. Engineering services should be designed and installed to ensure ease of maintenance and, whilst repairs are being carried out, the minimum interruption of services and of disturbance to the working of the hospital. The provision of meters for departmental costing purposes should be considered where these can be installed conveniently and inexpensively.

87. In designing the engineering services it is important to provide protection to fitments and equipment, and to avoid features which could cause harm to children.

Mechanical services

Heating and ventilating

88. Space heating requirements should be calculated on the following recommended design temperatures and ventilation rates based on an outside temperature of 30°F.:

Accommodation	*Temperature*	*Air changes per hour*
Treatment rooms	70°F.	6
Admission and bathrooms ...	70°F.	2
Multi-bed rooms, single-bed rooms, mother-and-child rooms, and day spaces ...	65°F.	3
Utility rooms, sister's room, doctors' room, nurses' station, sitting room, relatives' room, waiting spaces, ablution and sanitary facilities	65°F.	2
Milk room, sluice and test room	60°F.	6
Ward pantry, kitchenette, cloakroom, cleaners' room, corridors and staircases ...	60°F.	2
Linen bays, trolley/wheelchair bay, and flower room or bay	60°F.	½
Equipment store	50°F.	½

Heating

89. The above conditions are usually met by a conventional hot water radiator, flush fitting panel radiator or convector system: these have comparatively low installation and maintenance costs. In the wards, day spaces and other rooms where there are ambulant children, flush fitting panel radiators are preferred to recessed radiators, but exposed surfaces must not be so hot that children may be burned and for this reason convectors may be more suitable. Heating surfaces should be placed below windows and against exposed walls to counteract cold air currents. To facilitate cleaning, sufficient clear space should be left beneath radiators or convectors for the use of machines.

90. If ceiling heating systems are used they should conform to the recommendations of the Medical Research Council's Environmental Research Unit. These may be found in the " Guide to Current Practice " of the Institution of Heating and Ventilating Engineers.

91. For children's wards floor heating has some advantages, but the floor surface temperature should not be more than 75°F., and it may be necessary to supplement the system with another form of heating. Electric " off-peak " floor heating may be unsuitable, and should not be provided without careful consideration of the characteristics of this form of heating and the particular requirements, e.g. as to floor finishes.

92. Heating from the central system should be available during the summer months for use on cold summer days. Otherwise an alternative form of heating is desirable in the ward areas, day space, patients' bathrooms, washing facilities, and toilets: also in rooms where patients are changing, or likely to be undressed, i.e., admission room and treatment rooms. An electric heater should be provided at the nurses' station, and a luminous electric fire may be installed in the parents' sitting room.

93. Where children can come into contact with electric heaters, the heaters should have low surface temperatures, or be suitably guarded, the electric elements being totally enclosed.

94. Consideration should be given to zone control of the heating system. It is of particular importance where the design of the building incorporates a high proportion of glazing, and where, due to the solar heat gains and exposure, temperature control may be difficult.

Ventilation

95. Treatment and milk rooms should be provided with mechanical ventilation, the fresh air being filtered and warmed before being introduced into the room at high level through suitable diffusers designed to avoid the creation of draughts. Discharge from the treatment rooms should be to the outside by means of a suitably placed low level grille with a quiet lightweight flap valve in the ducting; in the milk rooms there should be mechanical extract from high level to outside. When the doors in these rooms are closed, a slightly pressurised condition in the room should be maintained.

96. One or two single-bed rooms may need to be mechanically ventilated to allow varied conditions of temperature and humidity, and to make a contribution to the control of airborne infection. A suitable arrangement would be to provide background heating from hot water panels or radiators, and an air supply from a central plant at a condition of 65°F., 50 per cent relative humidity, with a humidifier and booster heater to each room, controlled respectively by its own particular thermostat and humidistat. A ventilation rate of about 15 air changes per hour should provide a sufficient flow of air through the open doorway to prevent a flow in the opposite direction. Thus a system capable of introducing 15 air changes per hour of fresh air at the end furthest from the door, and extracting at a rate of 30 air changes per hour at the end near the door, would give the required results. Fresh air inlet and extract would operate together for infectious cases, but for cases at risk of infection, the extract would be shut off. The thermostat, humidistat, and extract shut off damper should be arranged so that the nurse can adjust them to suit the individual temperature, humidity, and air flow requirements. The rooms should be equipped with a thermometer and hygrometer.

97. Internal rooms should be mechanically ventilated to suit their individual requirements. Internal lavatories should have mechanical extract ventilation.

98. Mechanical extract at high level to outside should be provided in the ward pantry and kitchenette to reduce the steam and heat nuisance; it should also be provided in the dirty utility room and sluice room, but at low level.

99. There should be no re-circulation of air.

100. Filters of 95 per cent efficiency down to 5 microns are satisfactory, but additional coarse filters are necessary in districts where the air is dirty.

101. External discharges should be carried clear of the building and protected against back pressure from the wind. Air inlet grilles are necessary where the ventilation is extract only.

102. Particular care should be given to the type of opening window selected in naturally ventilated wards. Top opening windows at high level should be provided with a "minimum setting" notch or other adjustment to allow air infiltration without draught to the lightly clad patients. In ceiling heated rooms the incoming air should not be directed at the ceiling.

Hot and cold water and drinking water services

103. These are normally provided by connection to the main services of the hospital.

104. Hot water storage capacity should be based on meeting the maximum requirement for two hours, and the calorifier battery rating should be based on a three-hour recovery period, having regard also to the heat losses from the mains.

105. The cold water storage should be sufficient for 24 hours' requirements.

106. A drinking water tap taken directly from the mains should be provided in the ward pantry, kitchenette, and for bottle washing facilities in the milk kitchen. A drinking water tap may also be required near the medicine cupboard.

107. Lever arm taps of the type having a mixed flow outlet will be required where aseptic conditions make this necessary. Pillar taps should normally be provided elsewhere, but spray mixing taps have advantages for hand basins en suite with w.c.'s.

108. It is desirable that hot water taps likely to be used by children be supplied with water at a safe temperature. A separate circuit, with a thermostatically controlled mixing valve permanently set to keep the water at this temperature may be provided. Alternatively, it may be preferred to provide a thermostatic mixing valve either to individual, or to a range, of hot water taps.

109. The hot water circulation system should also serve bathroom towel rails, heated bed-pan (and pots), linen cupboards, and, where provided, the coils for clothes drying in cloakrooms.

Sterilising equipment

110. The supply of instruments and bowls will normally be from a C.S.S.D. and there should therefore be no need to provide sterilising facilities on the ward.

111. If a milk room is to be provided, the sterilising equipment required will depend upon the sterilising methods to be used. (See Building Note No. 21, Maternity Department.)

112. Where washing-up is not done centrally, a sink should be provided in the ward pantry, with facilities for hot rinsing. Alternatively, where there is likely to be a large amount of washing-up, consideration should be given to the provision of a dish-washing machine.

Steam supply

113. A steam supply to the department may be required. A mains pressure of 50 p.s.i. will cover all requirements and reducing valves can be used to suit the apparatus. Service pipes and traps should be sized to allow quick warming up.

Town gas

114. A gas supply may be required in the ward milk room, ward pantry and kitchenette, and possibly for incinerators.

Piped oxygen

115. The main advantages of a piped oxygen system are its immediate availability, the absence of noise and labour in moving gas cylinders about the hospital, cleanliness, and the economic advantages of purchasing gas either in large cylinders or in bulk. Whether the saving in running cost will repay the capital cost will depend on the quantity of oxygen used, medical needs, and local conditions. Normally the oxygen supply will be provided at convenient places, e.g. in multiple-bed rooms to serve every bay, in treatment rooms, and in all single-bed rooms. The system may require a special chamber with easy access for the replacement of cylinders, but since it will normally be an extension of a main system, this will probably be provided elsewhere.

Piped medical suction

116. Piped medical suction for treatment purposes will usually be required; the connectors would normally be placed beside the piped oxygen connectors. The vacuum cylinder and pump should be in a plant room, with pump exhaust led away to discharge outside, well clear of the roof, opening windows, and air intakes. This is a noisy item of equipment, and the noise and vibration should not be transmitted through the building.

Central vacuum cleaning

117. Opinions are divided on the advantages of a piped vacuum service for cleaners' use. This type of system is more expensive to install and run than the more conventional method with individual cleaners. Further study is needed to see whether any advantages to be gained in the use of the central system outweigh the disadvantage of additional cost. Meanwhile central vacuum cleaning should not normally be installed.

Lifts

118. All lifts (including car and landing doors) should be silent in operation. Noise and vibration from lift machinery should not be transmitted through the building.

Fire alarms and fire fighting equipment

119. Information on fire alarms and extinguishers is given in British Standard Codes of Practice, and in the Ministry's circular on Hospital Fire Precautions, H.M.(56)36. Advice on the fire fighting installation proposed should be sought from the local fire authority.

Electrical installation

General

120. The electrical installation in the ward unit will include wiring and equipment for general and special lighting, socket outlets, bedhead units, heating, ventilating, telephones, clocks and call systems.

121. Where children are involved, special consideration must be given to safety in the selection and positioning of electrical fittings, accessories, equipment, and apparatus.

Supply and distribution

122. The electrical supply will normally be provided by a sub-main circuit from the main intake and distribution centre. Local distribution boards should be placed to minimise the length of circuit wiring, and housed in ventilated spaces, preferably accessible from corridors: they should be easily reached from a standing position, and fitted with locks where necessary. H.R.C. fuses are recommended, and space should be allowed for future additional units, as well as the provision of some ways and fuses. Conduits and cables should normally be concealed, service ducts being provided wherever practicable; external conduit and fittings should be of water-proof materials.

Artificial lighting

123. Specialised lighting is largely confined to wards and treatment rooms. Lighting of other areas generally follows standard modern practice. The following table gives recommended values of illumination for various rooms:

Accommodation	*Average lumens/sq. ft. recommended at working level*
General lighting in multi-bed rooms	3*
Minimum in centre of multi-bed rooms	10
Single-bed rooms, and mother-and-child rooms	10
Bedhead lighting, nurses' station, day spaces, milk room, sister's and doctors' rooms, and sitting room	15
Treatment and admission rooms ...	20
Ward pantry, bathrooms, waiting areas, kitchenette, utility rooms, sluice and test room, and relatives' room	10
Cleaners' room, w.c.'s, and ablutions and cloakrooms	7*
Corridors and staircases, trolley/wheelchair bay, flower room or bay, stores and linen bay ...	7*†

*The standard given is required at floor level.

†This may be increased where adjacent intensities are high.

Lighting in wards

124. During normal evening hours the standard of illumination provided at the bed head (at normal bed height) by the general lighting should be

3 lumens per square foot. The illumination in the centre of the circulation space (usually between the feet of the beds) should be 10 lumens per square foot.

125. Night lighting should provide an indirect illumination on the bed of 0·1 lumens per square foot, and for the rest of the ward just sufficient light to enable staff to move around easily.

126. An illumination at night of 3 lumens per square foot should be adequate for the nurse's desk provided that the nurse does not have frequently to enter ancillary rooms lighted to much higher standards of illumination.

127. The avoidance of glare is important, and a glare index of not more than 13 is recommended. All lamps should be screened from the beds, and any part of a lighting fitting visible from a bed should have a brightness of not more than 1 foot lambert. These restrictions should be applied also to lights in corridors, circulation space, etc., which are outside the ward, but visible from the beds through unscreened glazing.

128. Tungsten filament lighting is normally used, but fluorescent lamp fittings with downward louvres and opaque sides have been found suitable for centre of ward illumination. The lamps should have acceptable colour rendering. Night lights of low wattage tungsten filament may be incorporated in the centre fittings; alternatively, flush wall-mounted units placed below bed level may be preferred, faced with reeded or coloured glass covers.

129. Single-bed rooms are usually lighted satisfactorily by a single lamp fitting.

130. It may be desirable in one or two single-bed rooms to increase the general lighting standard to 20 lumens per square foot. In addition the provision of a wall or ceiling mounted spot light (similar to that in the treatment room) may be considered.

131. Bedhead lights should be fixed, and should normally have tungsten filament lighting. They should be provided for each bed or cot position, and be placed approximately 6 ft. 6 in. above the floor. The shade should be opaque, of reasonably small diameter and approximately 10 in. deep, and must not become too hot to handle. The lamp should have a two-stage dimmer unit, mounted out of reach of a child in bed.

132. Special lighting in treatment rooms will vary with medical requirements, but generally speaking there should be a wall or ceiling mounted adjustable spot light in addition to the general lighting.

133. Local switch control is generally satisfactory, but in multi-bed rooms, general and night light is usually switched from the nurses' station.

Other lighting

134. Fittings in day rooms should be decorative as well as efficient, and corridor lighting fittings should be of the enclosed type. Staircase lights should be sited to enable easy cleaning and maintenance, and the switch positions for them should be carefully selected. A table lamp of suitable design should be provided for the nurses' station, and a wall or ceiling mounted spot light for the admission room. Except where they might constitute a spark risk, and an explosion hazard by contact with flammable vapour (see British Standard 2881, 1961), an indicating light (red), to British Standard, should be provided on the drug cupboard, with a parallel indicating light in the sister's room. These lights should be interlocked with the cupboard, to give visual indication when the cupboard is unlocked.

Socket outlets

135. Sufficient 13A. switched, shuttered, socket outlets, on ring or spur circuits, should be provided to allow all appliances which are likely to be used at any one time to be connected to a separate outlet. The following socket outlet distribution is suggested:

Mutiple-bed rooms	2 outlets shared between two beds
Single-bed rooms	1 outlet in addition to the one for bed position
Mother-and-child rooms	2 twin outlets

A greater provision of socket outlets may be required in one or two single-bed rooms and exceptionally in a multi-bed room. For these beds 2 outlets at the bed in single-bed rooms and 2 outlets for each bed in multi-bed rooms are recommended.

Treatment rooms	2 twin outlets, plus provision for fixed electrical apparatus
Admission room	1 twin outlet
Ward pantry, milk room and kitchenette	To suit number of appliances, plus one or two for future requirements (depending on the size of rooms). Outlets should include indicating lights.
Doctors' and sister's rooms	1 twin outlet
Nurses' station	1 twin outlet
Day space and parents' sitting room	1 twin outlet
Relatives' room	2 outlets
Clean utility room	1 twin outlet
Dirty utility room	1 single outlet
Waiting spaces, corridors, etc.	Outlets to be provided to allow for the convenient use of domestic appliances having a flexible lead assumed to be 30ft. long.

136. The placing of socket outlets between bed positions is suggested as an alternative to providing

them in the bedhead unit. In the former position they are more conveniently placed to serve electro-medical apparatus or domestic equipment, and so reduce the requirements for general purpose socket outlets. Fixed appliances should be connected to the mains by permanently installed wiring. Appliances with rating in excess of 13 A. should be permanently connected and supplied from separate final sub-circuits and independently switched.

137. Electro-medical apparatus and non-luminous heating appliances should be equipped with neon-type indicating lamps to show when they are in use.

Mains voltage outlets for mobile x-ray apparatus

138. X-ray apparatus calls for heavy currents for only very short periods, normally less than one second, and for satisfactory operation it is necessary that the sub-circuits should be capable of carrying these heavy currents without undue voltage drop. There is no likelihood of conductors becoming heated in normal use and there is no real advantage in using heavy duty outlets which are expensive and cumbersome. Indeed there is ample experience to show that 13 A. outlets are satisfactory for equipments having ratings up to 100 mA. and 30 A. outlets for higher ratings. To reduce voltage drop in the circuit where the larger mobile sets are to be employed, it may be necessary to use cable sizes as follows:

60 mA. apparatus 7/·052 cable (approx. 40 A.)
100 mA. apparatus 19/·044 cable (approx. 60 A.)

Facilities for the use of mobile x-ray apparatus are necessary in all wards, but where large socket outlets, e.g. 30 A., are necessary, only one or two of these, conveniently placed, should be provided.

139. Experience has shown that 13 A. socket outlets are satisfactory for mobile x-ray sets rated up to 100 mA. Ring circuits with 13 A. outlets are particularly suitable as the two-way feed will assist in reducing voltage drop and the circuit fusing (30 A.) is adequate. The overload contactor on the x-ray apparatus will provide adequate protection against any overload fault and the fuse contacts in the plug of the x-ray apparatus can be short circuited. The use of fused plugs will enable other apparatus to be safely supplied from the same socket outlets.

140. The size of cables must of course be determined by the permissible voltage drop. For a 100 mA. set this should not exceed 12·5 V. with a 50 A. load and it will usually be necessary to increase the size of circuit wiring above the normal 7/·029 in. where sockets are more than 20 yards with spur wiring or 40 yards with ring circuits from the distribution board.

141. Mobile x-ray apparatus with ratings over 100 mA. have recently been introduced and if likely to be used in wards heavier duty cables and sockets will be required. For example, for a mobile x-ray apparatus having an output up to 300 mA. a 7/·064 in. ring circuit with 30 A. mercury-type sockets has been found to be satisfactory.

Nurse call systems

142. Flush-mounted push buttons should be provided in the single- and multi-bed rooms, ablution and w.c.'s, to operate an indicating light and/or buzzers at the nurses' station, sister's room, and the ward pantry, to enable a nurse to call for assistance.

Telephones

143. Telephone facilities for internal and external calls for the ward unit will form part of the hospital telephone system, and will normally be provided in the doctors' room, admission room, sister's room, and nurses' station. Telephones should be desk pattern, and for sisters and nurses they should be fitted with an indicating call light visible from the corridor, and a quiet bell which, when desired, may be switched out of circuit independently of the call light.

144. G.P.O. telephone socket outlets for use with a portable call box unit may be provided for use by mothers in the mother-and-child rooms, or visitors' waiting space. One socket outlet may serve up to 4 mother-and-child rooms, depending on the layout. Special telephone jacks are being developed by the G.P.O., and until these become available, deep-type outlet boxes ($1\frac{1}{4}$ in. net) will be required in the telephone conduit or duct system for the use of the small telephone jack now provided by the G.P.O.

Electric clocks

145. Electric clocks will normally be required in the ward, day space, treatment rooms, and doctors' and sister's rooms. Impulse clock systems with silent clocks have advantages. Clocks in treatment rooms should be synchronous, with a sweep second pointer.

Staff location system

146. A wired staff location system, or a radio induction system should be provided as part of the general staff location system of the hospital. The system should enable staff to be called at night without disturbing the patients.

Television and radio

147. Provision should be made for television and radio installation in the day spaces, and they should be suitably earthed. A radio loud-speaker at high level is normally provided in the multi-bed rooms.

APPENDIX

Table showing recommended areas for rooms in basic accommodation for a ward unit of 20 beds (12 patients in multi-bed areas and 8 patients in single-bed rooms).

Type of room	*No. of rooms or beds*	*Area per room etc. (sq. ft.)*
(*a*) Wards.		
(i) and (ii) Single/mother-and-child rooms	8 rooms	Min. 120* Max. 200
(iii) Multi-bed rooms or bays	12 beds	100-110 sq. ft. per bed
(*b*) Day space (play area, dining and schoolroom)		30 sq. ft. per bed
(*c*) Treatment room	1	170
(*d*) Utility rooms		
(i) Clean utility	1	100
(ii) Dirty utility	1	100
(*e*) Bathroom	1	200
Shower cubicle	1	
(*f*) Patients' washing facilities	3 cubicles	
(*g*) W.c.'s w.c.'s area for potting	7 pot area	
(*h*) Sluice and test room	1	100
(*i*) Sister's room	1	120
(*j*) Nurses' station	1 (possible 2)	80-100
(*k*) Ward pantry	1	140
(*l*) Linen bay	1	50
(*m*) Stores	3 or 4	300-400 total
(*n*) Cleaners' room	1	50
(*o*) Trolley/wheelchair bay		
(*p*) Flower room or bay	1	50
† (*q*) Staff lavatories and cloakrooms		
Female w.c.	1	
„ cloakroom	1	
Male w.c.	1	
(*r*) Doctors' room	1	120
(*s*) Rooms for relatives	1	120
(*t*) Visitors' waiting space	1	
† (*u*) Visitors' lavatory accommodation		
Male	1	
Female	1	
(*v*) Parents' sitting room	1	120
(*w*) Mothers' washing facilities		
(*x*) Sundry facilities		
(*y*) Circulation space.		

*Maximum allowance of 1,280 sq. ft. for 8 single/mother-and-child rooms.

†This accommodation should serve the ward floor, not just one unit.

Hospital Building Note No. 2

Appendix E

Children's Ward

Hospital Building Note No. 23

The scales of accommodation and cost recommendations are applicable to general hospitals.

A. Basic accommodation

(*a*) *Wards*
- (i) Single-bed rooms
- (ii) Mother-and-child rooms
- (iii) Multiple-bed rooms or bays

(*b*) *Day space*

(*c*) *Treatment room*

(*d*) *Utility rooms*
- (i) Clean utility room
- (ii) Dirty utility room

(*e*) *Bathroom*

(*f*) *Patients' washing facilities*

(*g*) *W.c.'s*

(*h*) *Sluice and test room*

(*i*) *Sister's room*

(*j*) *Nurses' station*

(*k*) *Ward pantry*

(*l*) *Linen bay*

(*m*) *Stores*

(*n*) *Cleaners' room*

(*o*) *Trolley/wheelchair bay*

(*p*) *Flower room or bay*

(*q*) *Staff lavatories and cloakrooms**

(*r*) *Doctors' room*

(*s*) *Room(s) for relatives of dangerously ill patients**

(*t*) *Visitors' waiting space**

(*u*) *Visitors' lavatory accommodation**

(*v*) *Parents' sitting room*

(*w*) *Mothers' washing facilities*

(*x*) *Sundry facilities (space required for hoists, small service lifts, etc.)*

(*y*) *Circulation space necessary for the above accommodation.*

B. Additional accommodation

(*a*) *Admission room*

(*b*) *Milk room*

(*c*) *Dirty utility room*

(*d*) *Kitchenette*

*This accommodation serves the whole ward floor (i.e. two or more ward units).

Circulation space

For the purpose of the provisional cost limit the area occupied by internal circulation space and internal walls and partitions represents on average an addition of 43 per cent to the net floor area of basic and additional accommodation.

DEPARTMENTAL COST ALLOWANCES

1. Basic accommodation

Functional unit—the bed (i.e. the patient's bed)

For the first 20 beds	—allow £54,000
For every additional bed	—allow £2,625

2. Additional accommodation

Cost of additional accommodation—allow £5 12s. 0d. per square foot except for the following:

Milk room Dirty utility room Kitchenette	—allow £7 5s. 0d. per square foot. (See note (*b*) below)

Note: Engineering

(*a*) The following engineering services are included in items 1 and 2 above and account for approximately 26-28 per cent of their total cost:

Space heating, including air treatment of specialised rooms

Mechanical ventilation extract

Hot, cold (including fire hose connections) and drinking water

Piped oxygen and vacuum

Town gas

Lighting, power, clocks, telephone, staff location, fire alarms, nurses' call system, TV and radio conduits, x-ray socket outlets and wiring for mechanical services

Bed-pan washer, bed-pan steriliser, hot closet, grill unit, instantaneous water boiler, dish washing machine.

(*b*) The additional accommodation rate for the milk room does not include for an autoclave for bottle sterilisation or milk pasteurisation.

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